

1 Amendment "B"

2 Amendments to the Specification

3 The Specification is amended as provided hereafter:

4 Please replace the paragraph beginning at page 3, line 2, and ending at page
5 3 line 4, with the following paragraph:

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7 --The optical fibre may be defined by a stimulated Brillouin
8 Brillouin scattering threshold, and the optical fibre may have been
9 exposed to ultraviolet radiation at least partly along its length in order to
10 increase the stimulated Brillouin scattering threshold.--

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12 Please replace the paragraph beginning at page 3, line 5, and ending at page
13 3, line 7, with the following paragraph:

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15 --The optical fibre may be defined by a stimulated Brillouin Brillouin
16 scattering threshold, and the optical fibre may have been exposed to heat
17 treatment at least partly along its length in order to increase the
18 stimulated Brillouin scattering threshold.--

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20 Please replace the paragraph beginning at page 5, line 34 and ending at page
21 6, line 11, with the following paragraph:

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23 --Figure 11 shows an optical fibre 110 comprising two gain
24 mediums 111. The gain medium 111 can comprise one or more rare-
25 earth dopants. The rare earth dopant comprises one or more of
Ytterbium, Erbium, Neodymium, Praseodymium, Thulium, Samarium,
Holmium, Europium, Terbium, and Dysprosium. Preferably the rare

1 earth dopant is Ytterbium or Erbium. The Erbium may be co-doped with
2 Ytterbium. The disposition of the gain medium 111 is such that it
3 provides preferential gain for the fundamental modes 31, 32 and the
4 second second-order modes 43, 44 compared to the first second-order
5 modes 41, 42. This is because the first second-order modes 41, 42
6 have a null along the x-axis. Thus when the optical fibre 20 110 is bent,
7 the depressed index regions 21 will cause leakiness of the second
8 second-order modes 43, 44, and the bend will cause additional leakage
9 of the first second-order modes 41, 42. The preferential gain afforded by
10 the disposition of the gain medium 111 will offset losses seen by the
11 fundamental modes 31, 32 induced by the bend.--

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13 (Continued on next page.)
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